IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: Charles Jeff Morgan

Application No.: 10/716,687

Filing Date: November 19, 2003

For: POWER SHAFT INCLUDING A BELT RETAINING GEOMETRY

Confirmation No.: 6600

Patent No.: 7,722,491 B2

Patent Date: May 25, 2010

Attorney Docket No.: 200588-20700

REQUEST FOR CERTIFICATE OF CORRECTION UNDER 37 CFR § 1.322

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

It is requested that a Certificate of Correction be issued in connection with the above-identified patent correcting the errors listed on the accompanying Form PTO-1050. The corrections requested are as follows.

In column 6, line 2, before "from" delete "at".

In column 6, line 5, before "from" delete "at".

Support for these changes appears in application claim 2.

This request is being made pursuant to 37 CFR § 1.322 to correct errors that are clerical or typographical in nature and appear to have been made by the Office during the printing of the patent. Therefore, no fee is believed to be due for this request. Should any fees be required, however, please charge such fees to Winston & Strawn LLP Deposit Account No. 50-1814.

Respectfully submitted,

July 30, 2010
Date

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UNITED STATES PATENT AND TRADEMARK OFFICE

CERTIFICATE OF CORRECTION

PATENT NO. : 7,722,491 B2 Page 1 of 1

APPLICATION NO. : 10/716,687

DATED: : May 25, 2010

INVENTOR(S) : Morgan

It is certified that an error appears or errors appear in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Column 6:
Line 2, before "from" delete "at".
Line 5, before "from" delete "at".

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move laterally on the shaft **100** and into the reduced diameter portion **114** when excessive tension is present on the belt **201**. The transition regions **104** and **104'** and **105** and **105'** can comprise a radius, as previously discussed.

FIG. **5** shows a power shaft **500** according to yet another embodiment of the invention. In this embodiment, the second angled portion **108** comprises a curved portion having a substantially constant or varying curvature radius.

FIG. **6** shows a power shaft **600** according to yet another embodiment of the invention. In this embodiment, the second angled portion **108** extends only partially out toward the normal diameter **101**. The second angled portion **108** does not extend fully to the normal diameter **101**, but still presents a surface that stops the belt **201** from moving off of the shaft **600**.

FIG. **7** shows a power shaft **700** according to yet another embodiment of the invention. In this embodiment, the second angled portion **108** extends only partially out to the normal diameter **101**. The second angled portion **108** can be rounded off, such as in a knob shape, for example.

FIG. **8** shows a power shaft **800** according to yet another embodiment of the invention. In this embodiment, the normal belt position portion **110** includes a somewhat convex shape, wherein the belt **201** runs on this convex normal belt position portion **110** during normal operation.

It should be understood that the shape of the reduced diameter portion **114** can be varied and still be within the scope of the invention. Several representative shapes of the reduced diameter portion **114** are given. However, other shapes are contemplated and intended to be included in the invention.

The various embodiments of the invention can be implemented to provide several advantages, if desired. The power shaft according to the various embodiments of the invention retains the belt **201** on the shaft **100**. The power shaft according to the various embodiments of the invention prevents the belt **201** from moving off of the shaft **100**. The power shaft according to the various embodiments of the invention enables the belt **201** to move off of a normal operating position in the presence of a higher than normal load and resulting higher than normal tension force in the belt **201**. The power shaft according to the various embodiments of the invention returns the belt **201** to the normal operating position when the higher than normal load is removed. The power shaft geometry causes the belt **201** to seek and return to the normal belt position portion **110** after abnormal operation. The power shaft according to the various embodiments of the invention therefore removes the need for the belt **201** to be correctly and precisely installed.

What is claimed is:

1. A power shaft including a belt retaining geometry, with the power shaft having a shaft including a normal belt position portion adapted for receiving a belt, the power shaft characterized in that the comprises:

a reduced diameter portion formed on the shaft and located adjacent to the normal belt position portion;

wherein the belt can move into the reduced diameter portion of the power shaft during operation and the reduced diameter portion creates an alignment tension force on the belt that operates to return the belt to the normal belt position portion and wherein the diameter of the normal belt position portion is the full diameter portion of the shaft.

2. The power shaft of claim **1**, with the reduced diameter portion comprising:

a first angled portion that angles from a normal diameter of the normal belt position portion inwardly partially toward a center of the shaft and tapers to a reduced diameter and at a first angle from an exterior surface of the shaft;

a second angled portion that angles outwardly from the reduced diameter and at a second angle from the exterior surface of the shaft; and

a neck region formed between the first angled portion and the second angled portion, wherein the neck region transitions from the first angled portion to the second angled portion.

3. The power shaft of claim **2**, with the first angled portion tapering substantially regularly to the reduced diameter and at the first angle.

4. The power shaft of claim **2**, with the second angled portion extending at least partially to the exterior surface and the normal diameter of the shaft.

5. The power shaft of claim **1**, further comprising a first radius formed on a first transition region between the normal belt position portion and the first angled portion, with the first radius forming a substantially smooth transition from the normal belt position portion to the first angled portion.

6. The power shaft of claim **1**, with the neck region comprising a neck radius forming a substantially smooth transition from the first angled portion to the second angled portion.

7. The power shaft or claim **1**, wherein a first angled portion dimension is less than a belt width of the belt.

8. A power shaft including a belt retaining geometry, with the power shaft having a shaft including a normal belt position portion adapted for receiving a belt, the power shaft characterized in that the shaft comprises:

a first angled portion that angles from a normal diameter of the normal belt position portion inwardly partially toward a center of the shaft and tapers to a reduced diameter and at a first angle from an exterior surface of the shaft;

a second angled portion that angles outwardly from the reduced diameter and at a second angle from the exterior surface of the shaft;

a neck region formed between the first angled portion and the second angled portion, wherein the neck region transitions from the first angled portion to the second angled portion; and

the belt positioned on the normal belt position portion of the shaft;

wherein the belt can move into the reduced diameter portion of the power shaft during operation and the reduced diameter portion creates an alignment tension force on the belt that operates to return the belt to the normal belt position portion.

9. The power shaft of claim **8**, with the first angled portion tapering substantially regularly to the reduced diameter and at the first angle.

10. The power shaft of claim **8**, with the second angled portion extending at least partially to the exterior surface and the normal diameter of the shaft.

11. The power shaft of claim **8**, further comprising a first radius formed on a first transition region between the normal belt position portion and the first angled portion, with the first radius forming a substantially smooth transition from the normal belt position portion to the first angled portion.

12. The power shaft of claim **8**, with the neck region comprising a neck radius forming a substantially smooth transition from the first angled portion to the second angled portion.

13. The power shaft of claim **8**, wherein a first angled portion dimension is less than a belt width of the belt.

14. A method of forming a power shaft including a belt retaining geometry, the method characterized by the steps of: